

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of)	
)	
Review of the Commission's Part 95 Personal Radio Services Rules)	WT Docket No. 10-119A
)	
1998 Biennial Regulatory Review – 47 C.F.R. Part 90 – Private Land Mobile Radio Services)	WT Docket No. 98-182 RM-9222
)	
Petition for Rulemaking of Garmin International, Inc.)	RM-10762
)	
Petition for Rulemaking of Omnitronics, L.L.C.)	RM-10844

REPLY COMMENTS TO THE PETITION FOR PARTIAL RECONSIDERATION

Comment Date: July 15, 2018

To: The Commission

COMMENTS OF
Northern California GMRS Users Group (NCGUG)
Gregory J. Forrest, P.E. (KAF1291) - Author

INTRODUCTION

I represent a group of GMRS licensees who cooperatively own and operate several suburban GMRS repeater systems in the San Francisco, California bay area. This "ad-hoc" group of over 49 licensed individuals and families form the Northern California GMRS Users Group (NCGUG). Various Community Emergency Response Teams (CERT) also use our repeater systems for emergency and event communications, and regular emergency communications drills.

COMMENTS

The NCGUG submits these reply comments to the Petition for Partial Reconsideration of the R&O adopted to revise the Part 95 Personal Radio Services regulations filed by Motorola Solutions, Inc. (MSI). In that Recon Petition, MSI requested reconsideration of the decision to

not allow automatic or periodic GPS and data transmissions in the General Mobile Radio Service (GMRS).

The NCGUG generally supports the Recon Petition and believes it is in the public's interest to permit automatic data transmission, provided its implementation includes some practical safeguards to protect co-channel operations from interference.

The GMRS primarily consists of legacy analog FM equipment that has increasingly greater susceptibility to interference for several key reasons. First, current wideband analog FM requires a carrier-to-interference (C/I) ratio of 17 dB just to maintain commercial-level voice quality. However, most new FRS/GMRS and commercial GMRS radios operate only narrowband analog FM; this mode requires C/I ratio of 23 dB. Thus, GMRS users will experience greater interference over time even if signal levels and usage were to remain constant. Newer digital technologies, such as Digital Mobile Radio (DMR) only require a C/I of 14 dB, but these technologies are not currently permitted in the GMRS.

Second, the Commission recently permitted unlicensed operation on the GMRS primary frequencies.¹ This has noticeably increased their usage, particularly by commercial business operations (not individuals or families).²

Additionally, the Commission recently increased the maximum FRS transmitter power from ½ watt to two-watts (6 dB greater) on the GMRS primary frequencies.³ This will further impact the interference levels in this spectrum.

MSI is requesting potentially greater channel utilization, at a time when the potential for interference is growing.

MSI notes that such features "...will provide similar tracking capabilities..." to commercial services "...in remote areas...", and that the "...ideal use cases for this GMRS feature would occur in remote areas where there are few users should mitigate concerns over channel occupancy or interference between voice and data operations on shared channels....". While we agree, the vast majority of radios are operated in suburban and metropolitan areas, and particularly at large public events. We have spoken with some Community Emergency Response Team leaders who noted that FRS and GMRS channels are becoming difficult to use at these events due to co-channel interference.

NCGUG suggests the following practical approaches that would balance this useful feature with voice use:

¹ See §95.563, FRS channels.

² The GMRS has started to become "the other business radio service", impacting usage by individuals and families.

³ See §95.567, FRS transmit power.

Use of Busy Channel Lockout (BCLO). This feature would prevent immediate transmission of data when other co-channel (carrier-activated) activity is being received. Once the co-channel signal drops, the data message could be transmitted. This has very limited impact to the data as the recipient of the data burst may not have heard the message anyway due to the co-channel signal, and co-channel transmissions are short and have greater than 1-3 second pauses between messages. As noted by RepeaterFinder's reply comments, §95.359 requires stations to cooperate in the use of channels to avoid interference and make efficient use of these shared channels.

Prevent unnecessary transmissions from stationary radios. NCGUG is concerned about stationary radios – those that are inadvertently stored while still powered up, or those that may be occasionally or temporarily stationary - will continue to send unnecessary messages. Consider requiring a time-out and/or differential-movement requirement. Should a user be injured or unable to move, a radio could be configured to send messages at a much lower repetition rate (1/10th rate, etc.).

Prevent continuous use, or use by non-persons. NCGUG is concerned that such automatic devices could be used in various commercial applications (e.g., tracking of shipping containers, local material tracking and management systems, vehicle tracking, etc.) in extremely large numbers. Such high amounts of data traffic would render channels unusable by the service's intended users (individuals and families), or be impossible to locate if transient. Requires that automatic devices may only be used on persons, or be prevented from having external attachments, such as solar cells, utility power, etc. that would permit continuous operation.

Implement a maximum duty-cycle and periodicity for automatic transmission. We support RepeaterFinder's recommendation that cited Uniden America Corporation's 2015 ex parte filing proposing that automated messages be limited to no more than once every 2 minutes and no more than 5 seconds in duration.⁴ However, this could be reduced if BCLO was implemented.

We urge the Commission to consider a combination of all these reasonable and practical approaches. While the GMRS is practically restricted to analog FM operation having increasingly poor interference rejection, the Commission could also consider permitting newer digital technologies (DMR, NXDN, etc.) that are less susceptible to interference over the long term.

Continue to prohibit operation on GMRS 467 MHz repeater uplink/input frequencies.

Although MSI did not propose to operate on these frequencies, these remain vital for reliable high-elevation repeater operation and must not be affected by transient automatic transmissions.⁵

⁴ Letter from Gregg P. Skall, representing Uniden America Corporation, WT Docket 10-119, submitted June 11, 2015.

⁵ GMRS repeater owners already suffer from regular uplink interference from international (unlicensed) maritime operations and other illegal commercial use. Further problems would be extremely damaging.

Respectfully Submitted,

By: Gregory J. Forrest, P.E.

A handwritten signature in blue ink that reads "Gy J. Forrest". The signature is written in a cursive, flowing style.

Chairman, Northern California GMRS Users Group (NCGUG)

NCGUG

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END